

**HAHN AND ASSOCIATES, INC.**  
ENVIRONMENTAL CONSULTANTS

July 15, 2016

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Northwest Region, Portland Office  
Portland Harbor Section  
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HAI Project No. 2708  
DEQ ECSI File No. 84

**SUBJECT: Progress Report, NW Natural Site, 7900 NW St. Helens Avenue and  
7200 NW Front Avenue, Portland, Oregon**

Mr. Bayuk:

Hahn and Associates, Inc. (HAI) has prepared this monthly Progress Report to summarize Remedial Investigation/Feasibility Study (RI/FS) and source control-related work activities conducted by NW Natural relating to historic manufactured gas plant (MGP) activities at the NW Natural Site during the month of June 2016. NW Natural is completing upland investigation and cleanup activities at the NW Natural Site under the Voluntary Agreement No. ECVC-WMCVC-NWR-94-13 (Voluntary Agreement) between NW Natural and the Oregon Department of Environmental Quality (DEQ).

**1.0 Communications and Document Submittals**

In correspondence dated June 3, 2016 (Rob Burkhart to Terry Driscoll) DEQ provided input regarding evaluation of dichlorobenzene in HC&C treatment system influent and potential impacts on the treatment plant's NPDES permit.

In correspondence dated June 3, 2016 (Dana Bayuk to John Renda), DEQ provided agency (DEQ and EPA) comments related to review of the HC&C hydraulic data packages for the months of November 2015 through February 2016.

In correspondence dated June 6, 2016 (Jen Mott to Dana Bayuk), Anchor QEA, on behalf of Severson Environmental Services, Inc. and NW Natural, provided the *Revised Third and Fourth Quarter 2015 Residuals Lab Data Package for the Source Control Groundwater Treatment Facility*. Revisions were consistent with comments received from DEQ in correspondence dated April 25, 2016.

In correspondence dated June 9, 2016 (Rob Burkhart to Bob Wyatt), DEQ provided a warning letter related to effluent limit exceedances that occurred relative to NPDES Permit #103061 in 2014 as related to iron (3 exceedances), pH (2 exceedances), and mercury (2 exceedances). As noted in the letter, the exceedances resulted from start-up operations at the treatment system and were beyond the reasonable control of the permittee.

In correspondence dated June 10, 2016 (Jen Mott to Dana Bayuk), Anchor QEA, on behalf of NW Natural, provided information and a response to DEQ's May 26, 2016 e-mail requesting that NW Natural collect and compile data as related to the possible presence and magnitude of Rhone Poulenc constituents (e.g., dichlorobenzene and others) within groundwater extracted via the HC&C system.

In correspondence dated June 14, 2016 (Jen Mott to Dana Bayuk), Anchor QEA, on behalf of NW Natural, transmitted to DEQ for review a memorandum entitled *Single Well*

*Pumping Tests in Fill Water Bearing Zone Monitoring Wells at the NW Natural Gasco Site*, dated June 13, 2016.

In correspondence dated June 15, 2016 (Jen Mott to Dana Bayuk), Anchor QEA, on behalf of NW Natural, provided monthly HC&C system figure sets as part of the routine HC&C system reporting.

A meeting with representatives of DEQ, NW Natural, and Siltronic was conducted on June 15, 2016 to discuss DEQ's anticipated path forward and responsibilities as related to completion of remaining upland source control-related tasks for the Gasco and Siltronic properties.

In correspondence dated June 17, 2016 (Dana Bayuk to John Renda), DEQ provided approval of NW Natural's June 10, 2016 plans for evaluation and sampling as related to 1,2-dichlorobenzene and other potential Rhone Poulenc constituents potentially present within influent to the HC&C treatment system. NW Natural provided supplemental information regarding the proposed testing, as requested by DEQ, in a follow-up e-mail dated June 17, 2016 (John Renda to Dana Bayuk).

In correspondence dated June 27, 2016 (Dana Bayuk to Bob Wyatt), DEQ provided comments from review of the *Uplands Feasibility Study, Data Gaps Investigation Work Plan – NW Natural Gasco Site*, dated May 13, 2016.

In correspondence dated June 28, 2016 (Rob Ede to Mike Greenberg), HAI, on behalf of NW Natural, provided comments relative to the June 10, 2016 Golder Associates, Inc. report entitled *Highway 30 Gasoline Release: Spill Response and Assessment, Kenan Advantage Group, OERS #2015-2839*.

In correspondence dated June 29, 2016 (Dana Bayuk to Ben Hung and Halah Voges), DEQ provided a summary of the agency's understanding and concurrence with a revised Gasco RI/FS planning schedule as was discussed during a May 19, 2016 teleconference.

A groundwater modeling workshop was conducted on June 29, 2016. Anchor QEA presented the current status of the model calibration to DEQ and EPA.

In correspondence dated June 29, 2016 (Jen Mott to Dana Bayuk), Anchor QEA, on behalf of NW Natural, provided an electronic version of the slideshow presented during the June 29, 2016 Gasco Groundwater Modeling Workshop.

In correspondence dated June 30, 2016 (Pradeep Mugunthan to Dana Bayuk), Anchor QEA, on behalf of NW Natural, provided a summary of action items and resolutions that came out of the June 29, 2016 Groundwater Modeling Workshop Presentation.

## **2.0 Field Work**

Groundwater monitoring activities, consisting of manual water level measurements, DNAPL measurements, and sampling of select new wells and HC&C pumping wells, were completed in June 2016.

Completion of TarGOST boring installations as part of the HC&C Performance Monitoring Program was conducted during the weeks of June 20, 2016 and June 27, 2016. This event satisfies DEQ's direction to conduct an event 1 year after startup of full-time, full-scale operation of the HC&C System. Borings were advanced at the same locations as the November 2015 (6 month) event.

HAI field activities related to monitoring and maintenance of the dense non-aqueous phase liquid (DNAPL) extraction system at surficial fill well locations MW-6-32 and MW-13-30 occurred during June 2016. The system recovered approximately 40 gallons of fluids in June, primarily DNAPL.

Tasks related to maintenance of the HC&C system and the groundwater treatment system were conducted in June 2016, with the system operating under Phase 2 testing parameters since July 21, 2015.

Baseline DNAPL removal as needed to maintain at levels below the top of the well sumps was conducted by Anchor QEA during June 2016 in the following wells near the river shoreline.

- MW-18-30
- MW-26U
- MW-27U
- MW-38U
- MW-PW-2L
- PW-2L
- PW-13U

On March 31, 2014 NW Natural discontinued routine discharges of treated groundwater to the sanitary sewer (Industrial Wastewater Discharge Permit 500.022). During May 2016 all water was directed to NW Natural's on-site wastewater treatment plant and discharged to the Willamette River consistent with National Pollutant Discharge Elimination System (NPDES) Permit No. 103061 (expires August 31, 2018). Results from NW Natural's NPDES effluent sampling are provided to DEQ in Discharge Monitoring Reports that are submitted on a monthly basis in accordance with the permit. A total of 10,902,739 gallons of treated water were discharged under the NPDES permit during June.

### **3.0 Anticipated Activities in July and August 2016**

NW Natural and DEQ technical working group communications and meetings are anticipated to occur as needed during July and August 2016 to discuss ongoing project tasks.

The draft Feasibility Study Work Plan for the Gasco Uplands will be under development during the indicated timeframe, with submittal to DEQ scheduled to occur in August 2016.

Planning and preparations for completion of the RI/RA Addendum for the northern portion of the Siltronic property will be underway during the indicated timeframe. NW Natural hopes to work with the Oregon Department of Justice to complete related revisions to the Voluntary Agreement before the end of July 2016.

DEQ review and approval of HC&C model calibration is anticipated in July or August, 2016, with model validation, sensitivity analysis and particle tracking simulations to follow.

Follow-up discussions with NW Natural and DEQ will occur during this timeframe to work towards resolution of DEQ's concerns associated with the May 13, 2016 *FS Data Gaps Investigation Work Plan*.

The following reports and work plans for the Site have been submitted to DEQ through the date of this progress report. Unless otherwise noted, NW Natural has not received DEQ comments on these documents.

- *Fill WBZ Trench Design Evaluation Report, Gasco/Siltronic*, prepared by Anchor QEA, dated April 8, 2015.
- *Hydraulic Control and Containment (HC&C) System Operation and Maintenance (O&M) Manual*, prepared by Anchor QEA, dated May 1, 2015.
- *HC&C Capture Performance and Monitoring Plan (PMP)*, prepared by Anchor QEA, dated May 1, 2015.
- *Evaluation of Location of Former Industrial Use Water Supply Well Mult 802, NW Natural Gasco Property, Portland, Oregon*, prepared by HAI, dated November 11, 2015.
- Tabulation of the *Current Groundwater Monitoring Program* as approved for NW Natural implementation at the Gasco and Siltronic properties, transmitted January 15, 2016, revised March 18, 2016, and further revised by Siltronic Corporation April 15, 2016. This document needs DEQ feedback to confirm it achieves DEQ's objective of a holistic / comprehensive document.
- *Contaminated Materials Management Plan for the NW Natural Gasco Site*, prepared by Anchor QEA, dated February 23, 2016.
- *NW Natural Groundwater Treatment System Operations and Maintenance Manual*, prepared by Severson Environmental Services, Inc., dated March 2016
- *Outline for the Remedial Investigation/Risk Assessment Addendum for OU1, NW Natural Gasco Site*, prepared by HAI and Anchor, QEA, dated May 13, 2016.
- *Gasco Upland FS Data Gaps Investigation Work Plan*, prepared by Anchor QEA dated May 2016 (Feedback provided June 27, 2016)
- Responses to DEQ questions regarding Summary of Data Availability Tables, as provided by HAI on May 18, 2016 and Maul, Foster, & Alongi (MFA) on June 3, 2016.
- *Single Well Pumping Tests in Fill Water Bearing Zone Monitoring Wells at the NW Natural Gasco Site*, prepared by Anchor QEA, dated June 13, 2016.

In addition, based on feedback received from DEQ on June 9, 2016, DEQ will be providing written comments on the Gasco Site Stormwater Source Control Report submitted by NW Natural in September 2010 (received July, 15, 2016).

Further, NW Natural is awaiting feedback from DEQ on proposed amendments to the Gasco Voluntary Agreement. The proposed amendments address DEQ's November 2015 project restructuring determination and were submitted to ODOJ on March 3, 2016.

Should you have any questions, please contact the undersigned.

Sincerely,

A handwritten signature in black ink, appearing to read 'Rob Ede', followed by a large, stylized flourish.

Rob Ede, R.G.  
Principal

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